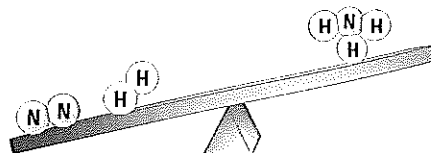


Equations

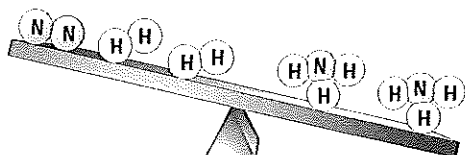
Q1 Balance the following equations by putting the correct numbers before the formulae.

- a) $\text{N}_2 + \text{H}_2 \rightarrow \text{NH}_3$
 b) $\text{CaCO}_3 + \text{H}_2\text{SO}_4 \rightarrow \text{CaSO}_4 + \text{H}_2\text{O} + \text{CO}_2$
 c) $\text{H}_2 + \text{O}_2 \rightarrow \text{H}_2\text{O}$
 d) $\text{Mg} + \text{O}_2 \rightarrow \text{MgO}$
 e) $\text{Ca} + \text{O}_2 \rightarrow \text{CaO}$
 f) $\text{H}_2 + \text{I}_2 \rightarrow \text{HI}$



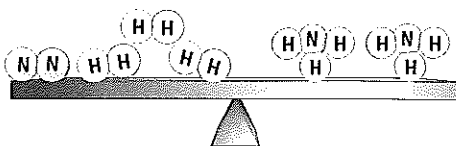
There's more...

- g) $\text{Mg} + \text{H}_2\text{SO}_4 \rightarrow \text{MgSO}_4 + \text{H}_2$
 h) $\text{H}_2\text{SO}_4 + \text{NaOH} \rightarrow \text{Na}_2\text{SO}_4 + \text{H}_2\text{O}$
 i) $\text{Ca} + \text{H}_2\text{SO}_4 \rightarrow \text{CaSO}_4 + \text{H}_2$
 j) $\text{H}_2\text{SO}_4 + \text{KOH} \rightarrow \text{K}_2\text{SO}_4 + \text{H}_2\text{O}$
 k) $\text{HCl} + \text{MgO} \rightarrow \text{MgCl}_2 + \text{H}_2\text{O}$
 l) $\text{CH}_4 + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$
 m) $\text{H}_2 + \text{NO} \rightarrow \text{H}_2\text{O} + \text{N}_2$
 n) $\text{HCl} + \text{Ca(OH)}_2 \rightarrow \text{CaCl}_2 + \text{H}_2\text{O}$



And more...

- o) $\text{Fe}_2\text{O}_3 + \text{CO} \rightarrow \text{Fe} + \text{CO}_2$
 p) $\text{C}_6\text{H}_{12}\text{O}_6 + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$
 q) $\text{CO}_2 + \text{H}_2\text{O} \rightarrow \text{C}_6\text{H}_{12}\text{O}_6 + \text{O}_2$
 r) $\text{C}_4\text{H}_{10} + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$
 s) $\text{C}_2\text{H}_4 + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$
 t) $\text{C}_3\text{H}_8 + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$
 u) $\text{C}_6\text{H}_{12} + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$
 v) $\text{C}_3\text{H}_6 + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$
 w) $\text{C}_2\text{H}_6 + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$



Q2 Tick the following equations if they are balanced. If they are not balanced, correct them.

- | | | | | | | | | |
|--------------------------|----|----------------------|---|----------------------------|---------------|-----------------------|---|---|
| <input type="checkbox"/> | a) | $4\text{NH}_{3(g)}$ | + | 5O_2 | \rightarrow | $\text{NO}_{(g)}$ | + | $\text{H}_2\text{O}_{(l)}$ |
| <input type="checkbox"/> | b) | $\text{HCl}_{(aq)}$ | + | $\text{NaOH}_{(aq)}$ | \rightarrow | $\text{NaCl}_{(aq)}$ | + | $\text{H}_2\text{O}_{(aq)}$ |
| <input type="checkbox"/> | c) | $\text{Na}_{(s)}$ | + | $\text{H}_2\text{O}_{(l)}$ | \rightarrow | $2\text{NaOH}_{(aq)}$ | + | $\text{H}_{2(g)}$ |
| <input type="checkbox"/> | d) | $\text{KI}_{(aq)}$ | + | $\text{Cl}_{2(g)}$ | \rightarrow | $2\text{KCl}_{(aq)}$ | + | $\text{I}_{2(aq)}$ |
| <input type="checkbox"/> | e) | $\text{Al}_{(s)}$ | + | $\text{Cl}_{2(g)}$ | \rightarrow | $2\text{AlCl}_{3(s)}$ | | |
| <input type="checkbox"/> | f) | $\text{CaCO}_{3(s)}$ | + | $\text{HCl}_{(aq)}$ | \rightarrow | $\text{CaCl}_{2(aq)}$ | + | $\text{H}_2\text{O}_{(l)} + \text{CO}_{2(g)}$ |
| <input type="checkbox"/> | g) | $\text{ZnO}_{(s)}$ | + | $\text{C}_{(s)}$ | \rightarrow | $\text{Zn}_{(s)}$ | + | $\text{CO}_{2(g)}$ |
| <input type="checkbox"/> | h) | $\text{CuCO}_{3(s)}$ | | | \rightarrow | $\text{CuO}_{(s)}$ | + | $\text{CO}_{2(g)}$ |
| <input type="checkbox"/> | i) | $\text{CuO}_{(s)}$ | + | $\text{CH}_{4(g)}$ | \rightarrow | $\text{Cu}_{(s)}$ | + | $\text{CO}_{2(g)} + \text{H}_2\text{O}_{(l)}$ |